# NEW BOOKS.

**A Treatise on Differential Geometry.** By LUTHER P. EISENHART. Boston: Ginn and Company. Pp. 474. $4.50.

It is the purpose of this book to introduce the student to the methods of differential geometry and to the theory of curves and surfaces developed thereby, to such an extent that he will be prepared to read the more extensive foreign treatises and journal articles. The reader is supposed to possess a knowledge of the calculus, elementary differential equations, and the elements of coördinate geometry of three dimensions. Hence the first half of the book may be used with seniors, and the remainder will constitute a full-year course for graduate students.

The method generally used is that of Gauss, common among German and Italian writers, but the kinematical method, frequently adopted in France, has been developed and applied where more feasible. This has been done not only because it furnishes the student with a powerful operator, but for the reason, also, that it develops geometrical thinking.

There are several hundred problems, some of which are direct applications of the accompanying sections, but many are theorems which might properly be established in a more extensive treatise. These have been inserted as an incentive to research and as preparation for larger problems.

**The Calculus and its Applications.** By ROBERT GORDON BLAINE, New York: D. Van Nostrand Company. Pp. 321. $1.50.

This book is compiled mainly from notes and examples prepared by the author for his classes. It is intended as an introduction to existing standard works on the subject. A large number of the problems are worked out for the sake of those students who desire to obtain a working acquaintance with the subject with little aid from a teacher. The examples given seem to be well selected and to cover the field of the various applications of the subject. It should prove a useful book for a first course.

**Constructive Drawing.** Revised edition. By HERMAN HANSTEIN. Chicago: Keuffel & Esser Company.

This book consists of about 140 problems and covers the work of the first year's course in the Chicago high schools and in the drawing department of the Chicago Mechanics Institute. The author's long experience has enabled him to select problems of practical importance to those who follow architecture, mechanical and engineering vocations, as well as problems which are indispensible to manufacturing and industrial pursuits.

**Diary and Time Saver for 1910.** Chicago: Laird and Lee.

This is one of the most useful diaries we have seen.

**Exercises in Geometry.** By GRACE LAWRENCE EDGETT. Boston: D. C. Heath & Co. Pp. 81.

The exercises in this book have been arranged in groups in such an order that it is in the nature of an appendix to the Harvard "Syllabus of Propositions in Geometry." They have been collected from various standard texts, from college entrance examinations and some have been evolved by the author.

**Plane Trigonometry.** By EDWARD R. ROBBINS. New York: American Book Company. Pp. 166. 60 cents.

This book is intended for high school and college preparatory courses. It is illustrated in the usual manner, but the diagrams are more than usually clear-cut and elucidating. No special tables are furnished, though the chapter on logarithms explains the use of tables in general.

The work is sound and teachable, and is written in clear and concise language, in a style that makes it easy for the beginner. Immediately after each principle has been proved, it is applied first in illustrative examples, and then further impressed by numerous exercises. All irrelevant and extraneous matter is excluded, thus giving greater emphasis to universal rules and formulas. Due emphasis is given to the theoretical as well as to the practical applications of the science. The number of examples, both concrete and abstract, is far in excess of those in other books on the market.

**Plane Geometry Developed by the Syllabus Method.** By EUGENE RANDOLPH SMITH. New York: American Book Company. Pp. 192. 75 cents.

This book has grown naturally from ten years' class work, and reflects the growing opinion among teachers that the proofs of geometry should be worked out by the pupils, rather than merely memorized. The list of theorems is sufficient for any college entrance examination. The laws of logic used in plane geometry are first stated in the most usable manner. The methods of discovering proofs are reduced to as few kinds as possible, and the definitions and axioms are given in quite complete form. The theorems are clearly stated, and the pupil is taught to discover the proofs by the application of his reasoning powers. The propositions are classified under heads suited to practical application to the work following. The exercises are numerous and helpful. This method stimulates the pupil to think to the limit of his ability, lays emphasis upon accuracy in the work, encourages originality, and develops individuality.